



DENVER SERVICE CENTER
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DENVER, COLORADO 80225

technical notes

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GUIDELINES FOR PROTECTING ARCHAEOLOGICAL SITES IN PROPOSED TREE-CHAINING AREAS*

1. Any standing wall, even if it is only two or three courses high, will be destroyed by chaining.
2. Large mound sites (without standing walls) and trash mounds are not generally affected by the chain. If the chain is dragged across the mound a few surface stones may be rolled, but this is only superficial and does not affect the mound. The tractors, however, should not run across the mound. The cleated tracks can dig into the mound, particularly if the tractor is trying to get traction to pull the chain through heavy growth.
3. Kiva depressions also should be avoided by the tractors for the same reason as the mounds above. The chain won't hurt them except as mentioned below.
4. Mound sites, kiva depressions, and trash mounds with trees growing on them or near their perimeters should not be chained. The uprooting of the trees can cause considerable damage. If there are only a few trees, these can be cut with hand or power saws fairly close to the ground. The chain will generally pass over the stumps (if they are not too high) and not be uprooted. The cut trees, however, should be removed from the mound or depression. There is always the possibility, if they are not pulled away from the site, that they will be caught by the chain and act as a gouge, digging into the site as they are pulled across it.

* This article was researched and prepared by Jack Rudy, formerly archeologist in the Utah State Office with the Recreation Staff. Mr. Rudy was involved in marking several areas in southeastern Utah prior to chaining and the testing, and observing the direct results that chaining of sagebrush and pinyon-juniper had on the prehistoric ruins in that area. These observations are the results of those experiences. Although Mr. Rudy's experiences and observations relate directly to prehistoric pueblo ruins, they are also valid for pit-houses, tipi rings, mounds, and various other prehistoric structures found over the West and Alaska. Kiva depressions can be equated with pithouses for all practical purposes.

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5. The less obvious sites, particularly those suspected of being Basketmaker pithouses, Pueblo I and early Pueblo II slab-walled structures, present the most difficulty. If there are trees scattered over the apparent site area it is best not to chain them. You cannot always tell where there will be pit structures or semi-subterranean houses (with slab or mud walls). The uprooting of trees on such sites can cause untold damage.

6. On sagebrush covered sites where no wall slabs protrude above the surface, the chain apparently does not do damage and thus they can be chained. The tractors crossing the sites also do not seem to cause any damage unless they are trying to get traction in pulling a heavy load, or the site is on a slope. The weight of the tractors does not seem to affect the site at all. The earth is usually fairly well compacted and consequently there is no give to the ground. It is only when the created tracks dig in for traction that damage is caused. (Sagebrush is very seldom uprooted. It is brittle, and it breaks off with the ground or simply bends under the chain.)

7. However, if wall slabs protrude above the ground, even just a few inches, the chain can catch them and pull them over. The tractor can do similar damage. Sites with protruding slabs were generally flagged if (a) there were numerous scattered exposed slabs, or (b) if the exposed slabs clearly defined or indicated the outline of a series of connected rooms.

8. Flaking areas, "campsites," and similar nebulous sites are a problem. If they are covered with sagebrush it is doubtful if chaining can do any real damage. If they are covered with trees, however, uprooting may destroy stratigraphy. These sites always cause the most difficulty in being consistent in flagging them. If they are numerous, or on the other hand, isolated finds in an otherwise siteless area, they should be flagged.

When flagging sites, two colors of plastic ribbon should be used. If the site can be chained but the tractors are to keep off, use blue ribbon. If the site is not to be chained under any circumstances, use blue and yellow tied together. The ribbons are placed on trees and high brush several feet beyond what is thought to be the perimeter of the site area. Completely circle the site so that the ribbon can be seen regardless from which direction the tractors approach the site. The ribbon is tied to branches at least head height, leaving at least 10 to 12 inches of loose ribbon so that it will flutter in a breeze. Try to place each tie of ribbon so that more than one can be seen from any spot along the line. This results in the ribbons being anywhere from 6 feet or more apart. Red ribbon should not be used because red is difficult to see against a background of green pinyon and juniper.



Another thing to keep in mind while flagging sites is to recognize areas where there might be a clustering of sites. If trees are fairly well scattered over the sites, flag the complete area so as to leave an "island" of trees within the chaining area. This, in a sense, accomplished two things: (a) it saves having to flag each individual site (sometimes each site may be flagged before we realize it is a site cluster), and (b) it leaves a "refuge" area of trees for wildlife.

This, in summary, is an approach to evaluating and marking sites in a chaining project area. There are no hard and fast rules. If, after looking over the site, it appears that substantial damage would be done either by the chain or the tractor, it should be flagged. Occasionally a site will be found that, on the surface, appears insignificant, but because of the nature and content of the cultural debris scattered about, if it is felt it might have hidden potential or significance, it should be flagged.

